UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,668	02/09/2004	Robert Mack	5087-143	1456

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EXAMINER
TAYONG, HELENE E

ART UNIT	PAPER NUMBER
2611	

MAIL DATE	DELIVERY MODE
11/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/775,668	MACK ET AL.
	Examiner	**Art Unit**	
	Helene Tayong	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 September 2007*.

2a)☒ This action is FINAL.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1,4-6,9-12 and 15-20* is/are allowed.

6)☒ Claim(s) *2,3,7,8,13 and 14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f)..

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to the amendment filed on 9/12/07.

Claims 1-20 are pending in the application. " The limitation non-overlapping was not

described in the specification non-overlapping" has been removed from claims I and 16.

Therefore, the rejection & claims 1 and 16 under 35 U.S.C. § 112, first paragraph is

moot. Claim 13 has been amended to provide adequate antecedent basis. Claims 1-20

are rejected and have been considered below.

Response to Arguments

2.   ***(1) with regards to claims 1,4-6,9-12,15-20;***

Applicant's arguments, see the rejection under 35 USC § 102(b) as being

anticipated by Raphaeli (U.S. Publication No. 2004/0202229) and rejection under 35

U.S.C. §103(a) as being unpatentable over Van Driest (U.S. Patent No. 6,115,411), filed

9/12/07 with respect to claims 1,4-6,9-12,15-20 have been fully considered and are

persuasive. The rejection of claims 1,4-6,9-12,15-20 has been withdrawn due to

amendment..

(2) with regards to claims 2 and 3;

Applicant should submit an argument under the heading "Remarks" pointing out

disagreements with the examiner's contentions. Applicant must also discuss the

references applied against the claims, explaining how the claims avoid the references or

distinguish from them.

(3) with regards to claims 7 and 8;

Applicant's arguments, see the rejection under 35 USC § 102(b) as being anticipated by Raphaeli (U.S. Publication No. 2004/0202229) and rejection under 35 U.S.C. §103(a) as being unpatentable over Van Driest (U.S. Patent No. 6,115,411), filed 9/12/07 with respect to claim 8 have been considered but are moot in view of the new ground(s) of rejection due to amendment.

Applicant's argument's*: " the correlator 40 in FIG. 2 of Raphaeli is not a data inverter converting a sequence o/'bits representing selected data values into lesser inverted data values, the slip encoder varying the spacing between some spread spectrum codes according to the inverted data values as recited in claim 7".*

Examiner's response- Raphaeli discloses on page 5, [0056] the function of the correlator. The correlator is implemented using a matched filter which functions to recognize the spreading waveform pattern. The spreading waveform pattern is stored as a template within the correlator and is used to detect the presence of spreading waveforms from the received signal.

Applicant's argument's: *"the correlatorof Raphaeli does not identify the inverted data values in a header so that the converted sequences of bits still represent the same selected data values while reducing the time spacing between the spread spectrum codes representing the selected data values.*

Examiner's response- Raphaeli discloses a header (fig. 3, 74) in the encoded data stream identifies the inverted data values (page 2, [0025]) and implicitly, could function to *convert sequences of bits still represent the same selected data values while*

reducing the time spacing between the spread spectrum codes representing the

selected data values.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 2, 7,13 and14 are rejected under 35 U.S.C. 102(b) as being anticipated

by Raphaeli (US 2004/0202229 A1).

(1) with regards to claim 2;

a spread spectrum encoder (fig. 1, 14) configured to encode data values with one

or more spread spectrum codes and generate a corresponding spread spectrum

encoded data stream (pg. 3, [0033]); and

a slip encoder configured to encode other data values into the encoded data

stream by varying time spacing between the spread spectrum codes (fig1, 14, pg. 3,

[0033]),

the slip encoder includes a slip counter (fig. 1, 38) that delays the code

counter from outputting the chips for adjacent spread spectrum codes according to

associated data values. (pg.5, [0056]).

(2) with regards to claim 7;

a data inverter converting a sequence of bits representing selected data values

into lesser inverted data values, the slip encoder varying the spacing between some

spread spectrum codes according to the inverted data values(fig. 2, 40).

(3) With regards to claim 13;

the slip decoder (fig. 2, 52) includes a slip counter that identifies an amount of

time between the data values identified by the slip counter (pg. 6, [0064]).

(4) With regards to claim 14;

The slip counter subtracts a transmit time value associated with transmitting the spread

spectrum codes from the identified time between data values (pg.6, [0066]).

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Raphaeli (US 2004/0202229 A1) in view of Jemsen et al (US 7092372).

(1) with regards to claim 3;

Raphaeli discloses the slip encoder includes a slip encoder inserts a slip pattern

between adjacent spread spectrum codes while being delayed by the slip counter (pg.

4, [0047]).

Raphaeli discloses all of the subject matter disclosed above, but for specifically

teaching a square wave signal that is different from the spread spectrum codes and

alternates between a logic one value and a logic zero value one each clock cycle.

However, Jensen et al in the same endeavor discloses a square wave signal

having values of +1 and 0 (col. 19, lines 30-31).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to have utilized the square waves of Jensen et al in the system of Raphaeli in

order to generate the slip pattern. The motivation to utilized Jersen et al's method in the

system of Raphaeli would be to provide for a low-cost and low-power system.

(2) with regards to claim 8;

Raphaeli discloses a header (fig. 3, 74) in the encoded data stream identifies the

inverted data values (page 2, [0025]).

Raphaeli discloses all of the subject matter discussed above, but for explicitly

teaching the functionality of the header to convert sequences of bits to still represent the

same selected data but reduce the time spacing between the spread spectrum codes

representing the selected data values.

Headers are well known in the art. Information in the headers can be changed

based on function. It would have been obvious to one of ordinary skilled in the art at the

time of the invention to have modified the header of Raphaeli to perform the functions of

claimed invention.

Allowable Subject Matter

7.   Claims 1,4,5,6, 9-12,15 and 16-20 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art of record, Raphaeli (US 20040202229) and Van Driest (US 6115411) discloses a spread spectrum encoder. However, both Raphaeli and Van Driest do not disclose a slip encoder configured to encode other data values into the encoded data stream by varying time spacing between the spread spectrum codes, wherein the other data values correspond to an amount of clock periods inserted by the slip encoder between the generation of adjacent spread spectrum codes so that generation of every first entire spread spectrum code is completed and then a time gap with no spread spectrum code is inserted before starting .generation of every second adjacent spread spectrum code, where the time gap between ending every first spread spectrum code and beginning every second adjacent spread spectrum code is proportional to one of the other data values and a time delay position in completing transmission of every entire second adjacent Spread spectrum code corresponds to the time gap.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene Tayong whose telephone number is 571-270-1675. The examiner can normally be reached on Monday-Friday 8:00 am to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Liu Shuwang can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for
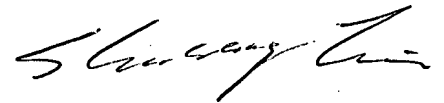
published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Helene Tayong

11/19/07

SHUWANG LIU
SUPERVISORY PATENT EXAMINER